AF

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Masao INOUE, et al.

Appln. No.: 08/987,380

Confirmation No.: 6198

Filed: December 09, 1997

For: GRANULAR PESTICIDAL COMPOSITION

Docket No: Q48500

Group Art Unit: 1617

Examiner: Shengjun Wang

SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of $500.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

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WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: February 7, 2006

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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I. REAL PARTY IN INTEREST

The real party in interest is Sumitomo Chemical Co., Ltd., by virtue of an assignment executed by the Appellants on February 18, 1998; February 26, 1998; and February 23, 1998, and submitted for recordation to the assignment Branch of the U.S. Patent and Trademark Office. The assignment was recorded on March 20, 1998, at Reel 009101, Frame 0101.

II. RELATED APPEALS AND INTERFERENCES

To the best of the knowledge and belief of the Appellants, the assignee and the undersigned, there are no other appeals or interferences before the Board of Appeals and Interferences that will directly effect or be effected by the Board's decision in the present appeal.

III. STATUS OF CLAIMS

Claims 1-3, 5-7, 10, 11, 13 and 16-18 are pending in the application.

Claims 1-3, 5-7, 10, 11 and 13 are rejected.

Claims 16-18 are withdrawn from consideration for being drawn to a non-elected invention.

Claims 1, 3, 5 and 11 contain non-elected subject matter directed to a granular pesticidal composition coated with epoxy resin and a method for manufacturing a granular pesticidal composition coated with epoxy resin. Therefore, the subject matter directed to a granular pesticidal composition coated with polyurethane resin and a method for manufacturing a granular pesticidal composition coated with polyurethane resin is under consideration.

Claims 1-3, 5-7, 10, 11 and 13 are being appealed.

Claims 1-3, 5-7, 10, 11, 13, and 16-18 are set forth in their entirety in the Claims Appendix submitted herewith.

IV. STATUS OF AMENDMENTS

An Amendment or other response has not been filed subsequent to final rejection.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention relates to a granular pesticidal composition coated with a thermosetting resin and a method for manufacturing a granular pesticidal composition

Claim 1 is an independent claim, drawn to the granular pesticidal composition. The composition recited in Claim 1 is coated with a thermosetting resin selected from the group consisting of polyurethane resin and an epoxy resin. When the thermosetting resin is a polyurethane resin, it is required that the granular pesticidal composition is obtainable by the method recited in Claim 6. A summary of the subject matter encompassed by claim 6 is provided below.

Claim 2 depends from Claim 1. It requires that the thermosetting resin is a polyurethane resin.

Claim 3 depends from Claim 1. It requires that the thermosetting resin is present in the composition in a proportion of from 0.5 parts by weight, based on 100 parts by weight the pesticidal active ingredient-containing granule.

Claim 5 depends from Claim 1. It requires that the thermosetting resin has a water absorption ratio of not more than 5%.

Claim 6 is an independent claim, drawn to a method for manufacturing a granular pesticidal composition. As described above, it is also a claim limitation of Claim 1. The method includes adding to 100 parts by weight of a pesticidal active ingredient-containing granule, a particular mixture and by repeating said adding of the mixture. When the thermosetting resin is a polyurethane resin, the particular mixture contains 0.05 to 1.5 parts by weight of:

(1) polyisocyanate having tri- or higher isocyanate groups and polyol,

(2) polyisocyanate and polyol having tri- or higher hydroxy groups, or

(3) polyisocyanate having tri- or higher isocyanate groups and polyol having tri- or higher hydroxy groups, for preparing a thermosetting resin.

Claim 7 depends from Claim 2, and is drawn to the granular pesticidal composition. It requires that the thermosetting resin is present in the composition in a proportion of from 0.5 parts by weight, based on 100 parts by weight the pesticidal active ingredient-containing granule.

Claim 10 depends from Claim 2. It requires that the thermosetting resin has a water absorption ratio of not more than 5%.

Claim 11 depends from Claim 3. It requires that the thermosetting resin has a water absorption ratio of not more than 5%.

Claim 13 depends on Claim 7. It requires that the thermosetting resin has a water absorption ratio of not more than 5%.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issue presented for review is:

whether the Examiner erred in rejecting Claims 1-3, 5-7, 10, 11 and 13 under 35 U.S.C. § 103(a) as being unpatentable over WO 91/10362 to Tocker ("Tocker") in view of WO 93/04017 (CA 2115998 is an English equivalent) to Burger *et al.* ("Burger") and U.S. Patent No. 4,722,490 to Kogler *et al.* ("Kogler").

VII. ARGUMENT

The Rejection

Claims 1-3, 5-7, 10, 11 and 13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tocker in view of Burger and Kogler.

To summarize the Examiner's position, the Examiner finds that it would have been obvious to modify the pesticidal granules described in Tocker with the polymerization processes described in each of Burger and Kogler. The Examiner contends that a person of ordinary skill in the art would have been motivated to look to Burger and Kogler, because the modification would lead to a stable, controlled release coating. Further, the Examiner contends that the results provided by the claimed granular pesticidal composition and method are not unexpected results.

The Error in the Rejection

The error in the rejection is that (i) the combination of Tocker in view of Buger and Kogler does not establish a *prima facie* case of obviousness against the rejected claims, and (ii) even if the combination established a *prima facie* case of obviousness against the rejected claims, the *prima facie* case of obviousness is rebutted because the composition of the present invention provides results which a person of ordinary skill in the art would not expect.

Why Claims 1-3, 5-7, 10, 11 and 13 are patentable under 35 U.S.C. § 103(a)

(i) Tocker is not combinable with either Burger or Kogler.

Tocker, in page 2, lines 23-31, describes that its granule is a controlled release granule of pesticides. Tocker discloses that the controlled release granule is prepared by overcoating a granular carrier with a liquid polyisocyanate and a polymerization catalyst. See Tocker at page

9, lines 3-7. More importantly, Tocker describes that the granule carrier contains a pesticide and a polyhydroxylated compound or water. Id. As such, the polymerization of the polyhydroxylated compound and the polyisocyanate is conducted on the surface of the granular carrier (i.e. interfacial polymerization is conducted), rather than before its application to the granular carrier. Tocker fails to teach or suggest that the polymerization thereof can occur at a different timeframe or location. In fact, Tocker teaches that its interfacial polymerization is "much more versatile and convenient" in that its polymerization reaction eliminates various obstacles previously found in interfacial polymerization. See Tocker at page 2, lines 3-21. Thus, it is essential to Tocker's invention that the polyhydroxylated compound be contained in the granular carrier and the interfacial polymerization be conducted with the granular carrier.

The Examiner looks to both Burger and Kogler to make up for the deficiencies of Tocker. Burger and Kogler teach processes that have the polyol not contained in the granular carrier.

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. MPEP §2142. In particular, the initial burden is on the Examiner to find some motivation or suggestion to make the claimed invention in light of the prior art teachings. The suggestion to modify must be "clear and particular." In re Sang Su Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433-1434 (Fed. Cir. 2002); Winner Int'l Royalty Corp. v. Ching-Rong Wang, 202 F.3d 1340, 1348-1349, 53 USPQ2d 1580, 1586-1587 (Fed. Cir. 2000).

In the present case, the suggestion to modify the cited art is not clear and particular. The Examiner contends that one of ordinary skill in the art would have been motivated to modify the granules described in Tocker, because the modification would lead to a stable, controlled

releasing coating. See, e.g., page 4 of the Office Action mailed on June 7, 2004. However, the motivation must be directed to why a person of ordinary skill in the art would replace one type of polymerization reaction with another, rather than to the generic objective of producing a controlled release granule. A person of ordinary skill in the art would not simply combine the references with different polymerization reactions, unless there is a motivation to replace one polymerization reaction with the other.

In addition, if the modification or combination of the prior art proposed by the Examiner would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 123 USPQ 349 (CCPA 1959). In other words, the Examiner's proposed combination of the prior art cannot destroy the teachings of the prior art reference being modified.

In the present case, Examiner's proposed combination would fundamentally change the invention described in Tocker, because the essence of Tocker's invention is in the interfacial polymerization method. As described above, Tocker boasts that its process is superior to previously known methods because of its convenient polymerization reaction. The modification to the extent proposed by the Examiner would eliminate the very polymerization reaction that makes the process thereof convenient. Thus, a person of ordinary skill in the art would not be motivated to modify the process described in Tocker with the processes described in Burger and Kogler.

At a minimum, Claims 5, 10, 11 and 13 are patentable over Tocker in view of Burger and Kogler, because Tocker fails to suggest producing a granule in which the thermosetting resin has

a water absorption ratio of not more than 5%. Tocker, Burger and Kogler do not teach anything about water absorption ratio. The Examiner contends that a person of ordinary skill in the art would reasonably expect the granules of Tocker to provide for an identical water absorption ratio, because Tocker merely teaches employing essentially the same polyols and polyisocyanates.

The prior art must teach or suggest all claim limitations. In addition, there must be a reasonable expectation that the proposed modification would be successful. MPEP 2143.02. Even if the prior art can be modified, the prior art must nevertheless suggest the desirability of the modification. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Applicants respectfully submit that Tocker fails to suggest a water absorption ratio of not more than 5%, because the mere teachings of employing identical polyols and polyisocyanates is not sufficient to motivate a person of ordinary skill in the art to modify the granules described in Tocker. Although the Examiner bears the burden to establish a *prima facie* case of obviousness, Applicants' specification, for example, shows that water absorption ratios of granular pesticidal compositions (3) and (5) are 6.19% and 3.32%, respectively. See Applicants' specification at page 34-38 and page 40. This is despite the fact that the raw materials of the polyurethane are the same. Therefore, the mere teachings of employing essentially the same polyols and polyisocyanates is not sufficient to expect a water absorption ratio of not more than 5%. Even if there is an expectation, a person of ordinary skill in the art would nevertheless not be motivated to modify the teachings of Tocker to provide for a water absorption ratio of not more than 5%.

(ii) Even if the combination established a *prima facie* case of obviousness against the rejected claims, the prima facie case of obviousness would be rebutted because the composition of the present invention provides superior results of controlled release, which one of ordinary skill in the art would not expect.

Applicants have submitted a Declaration with their response under 37 C.F.R. § 1.114(c), dated November 5, 2003. The Declaration explains an experiment conducted for the purposes of comparing the release ratio of the granules described in Tocker with the granular pesticidal composition recited in the claims. Composition (1) is an example of the granular pesticidal composition recited in the claims. Comparative Composition (2) is analogous to the granules described in Tocker. Comparative Composition (2) was produced by adding trifunctional polypropylene glycol polyol to a granular carrier, and then twice adding polymeric MDI thereto as the polyisocyanate. See Declaration of INOUE, Masao at page 4.

The experiment establishes that Composition (1) provides a controlled release of a pesticidally active ingredient, which is superior to that provided by Comparative Composition (2). The experiment shows that Comparative Composition (2) has a release ratio in which the initial amount of the pesticidal active ingredient was completely eluted within or up to 14 days. In stark contrast, the experiment shows that Composition (1), according to the present invention, was still providing for a controlled release of the pesticidal active ingredient past 14 days, and even after 42 days.

The Examiner takes the position that superior result alone cannot overcome a rejection of obviousness, "since the rejection is based on combining Tocker with Burger and Kogler." See

page 5, lines 1-3, of the Office Action mailed on June 7, 2004. In fact, the Examiner contends that Tocker in view of Burger and Kogler fairly suggest these superior results because the cited art suggests coating a granule thereof with sufficient homogeneity, physical stability, resistance to frost, and a controlled release of the active ingredient. See page 5, lines 3-5 of the Office Action mailed on June 7, 2004.

The Examiner must consider affidavits or declarations of unexpected results in determining the issue of obviousness under 35 U.S.C. § 103(a). See MPEP 716.01(a). Evidence of unexpected properties may be in the form of a direct or indirect comparison of the claimed invention to the closest prior art. See MPEP 716.02(b)(III). The requirement that an applicant compare the claimed invention with the composition suggested by the combination of references would incorrectly require comparing of the results of the invention with the results of the invention. MPEP 716.02(e)(III) (citing In re Chapman, 357 F.2d 418, 148 USPQ 711 (CCPA 1966)).

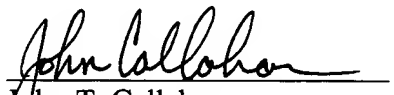
In the present case, a person of ordinary skill in the art would not expect the results illustrated in the Declaration. The Declaration demonstrates that the claimed granular pesticidal composition provides a controlled release of the pesticidal active ingredient that is more than three times the length of controlled release of Comparative Composition (2). Furthermore, the process employed to produce Composition (1) provided reduced agglomeration, than that compared to the amount of agglomeration observed for Comparative Composition (2). Therefore, a person of ordinary skill in the art would find the results provided in the Declaration unexpected.

However, the Examiner requires Applicants to provide a comparison of the claimed invention with a composition provided by combining Tocker in view of Burger and Kogler. As provided in MPEP 716.02(e)(III), the claimed invention need merely be compared with the closest "prior art," rather than the resulting combination of the cited art. The patentability standard required by the Examiner would provide the incorrect result that Applicants must compare their claimed invention with the invention itself. The superior release ratio of the claimed granular pesticidal composition establishes the patentability of the rejected claims. The requirement that the present invention be compared with the combination of the cited art fails to undermine the patentability of the rejected claims.

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: February 7, 2006

CLAIMS APPENDIX

CLAIMS 1-3, 5-7, 10, 11 and 13 ON APPEAL: CLAIMS 16-18 WITHDRAWN.

1. A granular pesticidal composition coated with a thermosetting resin selected from the group consisting of a polyurethane resin and an epoxy resin, wherein when the thermosetting resin is a polyurethane resin, the granular pesticidal composition is obtainable by the method according to claim 6, and when the thermosetting resin is an epoxy resin, the granular pesticidal composition is obtainable by the method accord to any one of claims 16-18.

2. The granular pesticidal composition according to claim 1, wherein the thermosetting resin is a polyurethane resin.

3. The granular pesticidal composition according to claim 1, wherein the thermosetting resin is present in a proportion of from 0.5 to 15 parts by weight based on 100 parts by weight of a pesticidal active ingredient-containing granule to be coated.

5. The granular pesticidal composition according to claim 1, wherein the thermosetting resin has a water absorption ratio of not more than 5%.

6. A method for manufacturing a granular pesticidal composition coated with a polyurethane resin, comprising the steps of (a) adding a mixture containing 0.05 to 1.5 parts by

weight of (1) polyisocyanate having tri- or higher isocyanate groups and polyol, (2) polyisocyanate and polyol having tri- or higher hydroxy groups, or (3) polyisocyanate having tri- or higher isocyanate groups and polyol having tri- or higher hydroxy groups for preparing a thermosetting resin to 100 parts by weight of a pesticidal active ingredient-containing granule to be coated; and (b) repeating step (a).

7. The granular pesticidal composition according to claim 2, wherein the thermosetting resin is present in a proportion of from 0.5 to 15 parts by weight based on 100 parts by weight of a pesticidal active ingredient-containing granule to be coated.

10. A granular pesticidal composition according to claim 2, wherein the thermosetting resin has a water absorption ratio of not more than 5 %.

11. A granular pesticidal composition according to claim 3, wherein the thermosetting resin has a water absorption ratio of not more than 5%.

13. A granular pesticidal composition according to claim 7, wherein the thermosetting resin has a water absorption ratio of not more than 5%.

16. A method for manufacturing a granular pesticidal composition coated with an epoxy resin, comprising the steps of (a) adding a mixture containing 0.05 to 1.5 parts by weight

of phenol or alcohol and epichlorohydrin for preparing the epoxy resin to 100 parts by weight of the pesticidal active ingredient-containing granule to be coated; and (b) repeating step (a).

17. A method for manufacturing a granular pesticidal composition coated with an epoxy resin, comprising the steps of (a) adding a mixture containing 0.05 to 1.5 parts by weight of carboxylic acid and epichlorohydrin for preparing the epoxy resin to 100 parts by weight of the pesticidal active ingredient-containing granule to be coated; and (b) repeating step (a).

18. A method for manufacturing a granular pesticidal composition coated with an epoxy resin, comprising the steps of (a) adding a mixture containing 0.05 to 1.5 parts by weight of amine, cyanuric acid or hydantoin and epichlorohydrin for preparing the epoxy resin to 100 parts by weight of the pesticidal active ingredient-containing granule to be coated; and (b) repeating step (a).

EVIDENCE APPENDIX:

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), submitted herewith are copies of any evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or any other evidence entered by the Examiner and relied upon by Appellant in the appeal.

This document has been submitted on November 5, 2003.

RELATED PROCEEDINGS APPENDIX

Submitted herewith are copies of decisions rendered by a court or the Board in any proceeding identified above in Section II pursuant to 37 C.F.R. § 41.37(c)(1)(ii).

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of
Inoue et al.
Serial No. 08/987,380
Filed: December 9, 1997
For: Granular Pesticidal Composition

Art Unit 1617
Examiner: WANG, SHENGJUN

DECLARATION

Honorable Commissioner of
Patents & Trademarks
Washington, D. C. 20231

Sir:

I, Masao INOUE, a citizen of Japan, residing at 298-1-503, Setogaya-cho, Hodogaya-ku, Yokohama-shi, Kanagawa, Japan, declares:

That I graduated from Kyoto University, Faculty of Engineering, Department of Polymer Chemistry in March 1988, and from the master course of said university in March 1990;

Then I entered Sumitomo Chemical Company, Limited in April 1990, and from then to June 2002, I had been engaged in studies of pesticidal formulation in Agricultural Chemicals Research Laboratory of said company and from July 2002, I have been engaged in management of formulation research and production in Planning & Coordination Office, Agricultural Chemicals Sector of said company.

That I conducted the following experiment to show effects of the invention of the above-identified application:

Experiment

<Production Example (1)>

Four parts by weight of N-(1,1,3-trimethyl-2-oxa-4-indanyl)-5-chloro-1,3-dimethylpyrazole-4-carboxamide [Furametpyr] and 0.8 parts by weight of hydrated silica were completely mixed in a juice mixer, and then, the mixture was ground by a pin mill. The resulting ground material has an average particle size of 19.1 μm (measured value by Coulter Counter TA II type).

The resulting ground material (4.8 parts by weight) obtained above, 20 parts by weight of Bentonite Fuji (bentonite manufactured by Hojun Yoko K.K.), 2 parts of Gohsenol GL-05 (manufactured by Nippon Synthetic Chemical Industry Co., Ltd.), 2 parts by weight of Sorpol 5060 (Toho Chemical Co., Ltd.) and 71.2 parts by weight of Fubasami clay A300 (clay manufactured by Fubasami Clay Industry Co., Ltd.) were completely mixed by a juice mixer, and the mixture was transferred to a mortar, and to this was added 20 parts by weight of water, and they were completely kneaded. The resulting kneaded material was granulated by a laboratory extruding granulator equipped with a 0.9 mmϕ die plate, and the particle size of the obtained granules was made uniform. Then, the granules was dried at 60°C for 15 minutes to obtain the pesticidal active ingredient-containing granule having a particle size from 1400 to 700 μm.

One thousand grams of the resulting pesticidal active ingredient-containing granule was rolled at 20 to 30 rpm in an inclined pan type rolling granulator which could control temperature equipped with a hot air generator, and to this was added 5 g of a mixture obtained by mixing 46.5 parts by weight of a polymeric MDI (mixture having a polymerization degree of 1 to 3), 52.5 parts by weight of trifunctional polypropylene glycol polyol and 1 part by weight of 2,4,6-tris(dimethylaminomethyl)phenol with maintaining the temperature at from 65 to 70°C, and the temperature of the mixture was kept at from 70 to 80°C for 3 minutes. The same operation that the mixture of the polymeric MDI, the trifunctional polypropylene glycol polyol and the

2,4,6-tris(dimethylaminomethyl)phenol was added and the resulting mixture was kept at from 70 to 80°C for 3 minutes was repeated 30 times, and finally, the resulting mixture was kept at from 65 to 70°C for 10 minutes to obtain a granular pesticidal composition (1) of the present invention.

The resultant obtained by adding the polymeric MDI, the trifunctional polypropylene glycol polyol and the 2,4,6-tris(dimethylaminomethyl)phenol to the pesticidal active ingredient-containing granule had good condition for mixing, although it had a middle viscosity. The granular pesticidal composition (1) was uniformly coated , and no agglomerated granules were observed.

<Comparative Production Example (1)>

The pesticidal active ingredient-containing granule was obtained using the same method as the Production Example (1).

One thousand grams of the pesticidal active ingredient-containing granule was rolled at 20 to 30 rpm in an inclined pan type rolling granulator and to this was added 100 g of a mixture of 90 g of the trifunctional polypropylene glycol polyol and 10 g of the 2,4,6-tris(dimethylaminomethyl)phenol. The resultant was mixed moreover to give granules containing the pesticidal active ingredient and the polyol.

One thousand and one hundred grams of the granules obtained was rolled at 20 to 30 rpm in an inclined pan type rolling granulator which could control temperature equipped with a hot air generator, to this was added 60 g of the polymeric MDI with maintaining the temperature at from 65 to 70°C. Then, the resultant was mixed at 65 to 70°C for 60 minutes to obtain a comparative composition (1).

The resultant obtained by adding the polymeric MDI to the granules containing the pesticidal active ingredient and the polyol had a remarkable viscosity and no good condition for mixing in the granulator. The comparative composition (1) contained not only coated granules but also a lot of agglomerated granules.

<Comparative Production Example (2)>

The granules containing the pesticidal active ingredient and the polyol was obtained using the same method as the Comparative Production Example (1).

One thousand and one hundred grams of the granules obtained was rolled at 20 to 30 rpm in an inclined pan type rolling granulator which could control temperature equipped with a hot air generator, to this was added 10 g of the polymeric MDI with maintaining the temperature at from 65 to 70°C. Then, the resultant was mixed at 65 to 70°C for 20 minutes. The same operation that the polymeric MDI was added and the resulting mixture was mixed at 65 to 70°C for 20 minutes was repeated 5 times, to obtain a comparative composition (2).

The comparative composition (2) contained not only coated granules but also agglomerated granules.

The resultant obtained by adding the polymeric MDI to the granules containing the pesticidal active ingredient and the polyol had a remarkable viscosity and no good condition for mixing in the granulator.

<Test Example>

Into a 500 ml beaker were charged the composition (1) and the comparative composition (2) obtained in the above Production Example 1 and Comparative Production Example 2 (300 mg, respectively) and 300 ml of 3° hardness water, and the mixture was stirred mildly. The temperature of the solution was kept at 25±1°C, and after given time, 1ml of the solution took out from the center part of the beaker was analyzed by gas chromatography to measure the amount of the pesticidal active ingredient therein, and release ratio was calculated appropriately by the following formula.

$$\text{Release ratio (\%)} = \frac{\text{Amount of pesticidal active ingredient (mg) in 1 ml of sample} \times 300}{\text{Initial amount of pesticidal active ingredient (mg) in 300 mg of composition tested}} \times 100$$

The results are shown in the following table.

	Release ratio (%)	
	14 days after	42 days after
Composition (1)	45	72
Comparative composition (2)	100	100

The undersigned declarant declares further that all statements made herein of his own knowledge are true an that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 31 day of October 2003.

Masao INOUE